A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B30B15/28 B30B9/32

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\begin{array}{ccc} \mbox{MinImum documentation searched} & \mbox{(classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{B30B} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Υ	US 5 094 107 A (SCHOCH DANIEL A) 10 March 1992 (1992-03-10)	1–9
X	column 5, line 23 - line 33; figures	10-12
Y	DE 198 04 789 A (SVEDALA LINDEMANN GMBH) 12 August 1999 (1999-08-12) cited in the application claims; figures	1–9
A	US 6 466 840 B1 (SCHOCH DANIEL A) 15 October 2002 (2002-10-15) abstract; figures	1-12
A	US 6 484 106 B1 (SCHOCH DANIEL A) 19 November 2002 (2002-11-19) abstract; figures	1–12
	-/	

 Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filling date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filling date but later than the priority date claimed 	 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
20 April 2004	28/04/2004
Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Belibel, C

Patent family members are listed in annex.

Further documents are listed in the continuation of box C.

INTERMIONAL SEARCH REPORT

ina DE	I Application No
i_/DE	03/04112

		DE 03/04112
C.(Continua	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 209 400 B1 (EVERS KEVIN J ET AL) 3 April 2001 (2001-04-03) abstract; figures 3,4	1-12
Α	US 4 023 044 A (MILLER ROBERT C ET AL) 10 May 1977 (1977-05-10) abstract; figures	1-12
A	US 5 448 902 A (LIEWALD MATHIAS ET AL) 12 September 1995 (1995-09-12) abstract; figures	.1–12
Α	DE 39 38 854 A (SIEMENS AG) 31 May 1990 (1990-05-31) abstract; figures	1–12
A	US 4 918 364 A (NAITO KINSHIRO) 17 April 1990 (1990-04-17) abstract; figures	1-9
		

INTERIORINAL SEARCH REPORT

at Application No DE 03/04112

		, i	·			ILT/DE	03/04112
	atent document d in search report		Publication date		Patent family member(s)		Publication date
US	5094107	Α	10-03-1992	DE	4124675	A1	12-03-1992
DE	19804789	Α	12-08-1999	DE	19804789	A1	12-08-1999
	2000	•		AT	223305		15-09-2002
				AU	738844		27-09-2001
				AU	2609699		23-08-1999
				BR	9907690		14-11-2000
				CA	2320205		12-08-1999
				CN	1291937		18-04-2001
				WO	9939900		12-08-1999
				DE	59902557	D1	10-10-2002
				ΕP	1056589	A1	06-12-2000
				ES	2184412	T3	01-04-2003
				JP	2003532538	T	05-11-2003
				NO	20003846	Α	02-10-2000
				PL	342004		07-05-2001
				PT	1056589		31-01-2003
				RU	2201869		10-04-2003
				US	6546855	B1	15-04-2003
US	6466840	B1	15-10-2002	US	2003018409		23-01-2003
				DE	19952834	A1	04-05-2000
				JP	2000190096	Α	11-07-2000
US	6484106	B1	19-11-2002	CA	2314722		30-01-2001
•				DE	10037665		01-02-2001
				GB	2352669		07-02-2001
				JP	2001079700	A 	27-03-2001
US	6209400	B1	03-04-2001	BR	9800274		15-06-1999
				CA	2220311		13-07-1998
				CH	692845		29-11-2002
				DE	19736861		16-07-1998
				FR	2758391		17-07-1998
				GB	2321109		15-07-1998
				IT	T0971102		13-07-1998
				TW	446590	D 	21-07-2001
US	4023044	Α	10-05-1977	ΑU	1014476		14-07-1977
				BE	837711		20-07-1976
				BR	7600241		31-08-1976
				CA	1125891		15-06-1982
				CH	602273		31-07-1978
				DE	2600680		22-07-1976
				ES	444479		16-09-1977
				FR	2297692		13-08-1976
				GB	1511942		24-05-1978
				ΙŢ	1056685		20-02-1982
				JP	1261636		25-04-1985
				JP	51097075		26-08-1976
				JP	59039240		21-09-1984
				SE	430005		10-10-1983
				SE	7600521		21-07-1976
				US	4088899		09-05-1978
				_ZA	7508065 	A 	29-12-1976
us	5448902	Α	12-09-1995	DE Es	4242442 2092950		23-06-1994 01-12-1996

INTERMONAL SEARCH REPORT

nal Application No F-1/DE 03/04112

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5448902	A		FR IT JP JP	2699097 A1 1266445 B1 2699052 B2 7068327 A	30-12-1996
DE 3938854	A	31-05-1990	DE	3938854 A1	31-05-1990
US 4918364	Α	17-04-1990	JP DE FR GB	62183919 A 3703674 A1 2594062 A1 2186394 A	14-08-1987